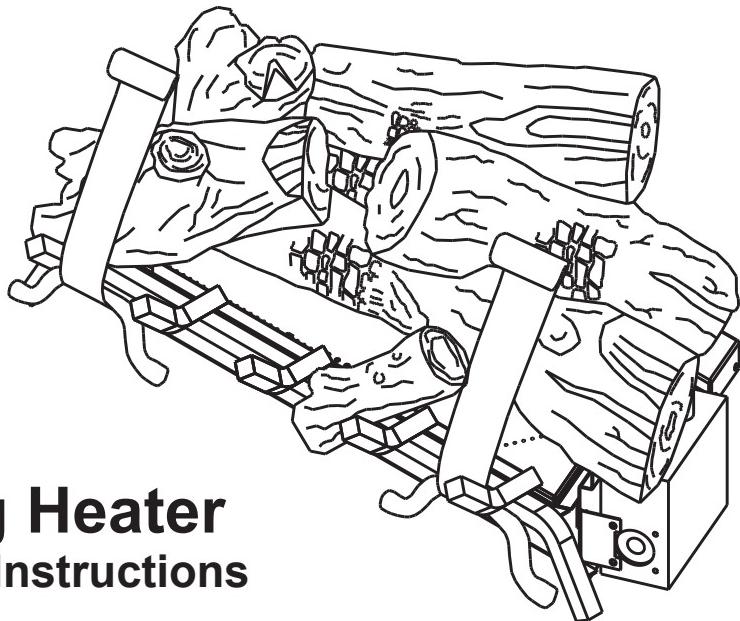




Unvented Gas Log Heater

Installation and Operating Instructions



This appliance may be installed in an aftermarket, permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to page 7.

MODELS: MJ27NR, MJ27PR

Natural Gas or Liquid Propane
Control Type: Millivolt Hi/Low

WARNINGS

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

READ AND SAVE THESE INSTRUCTIONS

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IMPORTANT SAFETY INFORMATION

INSTALLER

Please leave these instructions with the appliance.

OWNER

Please retain these instructions for future reference.

IMPORTANT

Read these instructions carefully before installing or trying to operate this vent-free gas heater.

WARNING

- Any change to this heater or its controls can be dangerous.
- Improper installation or use of the heater can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.
- Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.
- Do not use a blower insert, heat exchanger insert or other accessory, not approved for use with this heater where applicable.

1. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
2. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
3. Young children should be carefully supervised when they are in the same room with the appliance.
4. Do not place clothing or other flammable material on or near the appliance.
5. Any safety screen or guard removed for servicing an appliance, must be replaced prior to operating the heater.
6. Installation and repair should be done by a qualified service person.
7. To prevent malfunction and/or sooting, an unvented gas heater should be cleaned before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways be kept clean.
8. **CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Have the heater serviced as it may not be operating properly.

9. The installation must conform with local codes or, in the absence of local codes, with the **National Fuel Gas Code, ANSI Z223.1/NFPA54**.
10. This unit complies with the latest revision of ANSI Z21.11.2-2007 Unvented Heaters
11. Do not install the heaters in a bathroom or bedroom.
12. Correct installation of the ceramic fiber logs, proper location of the heater, and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the fireplace. See log placement instructions for proper installation.
13. Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside burn area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
14. **CAUTION:** Candles, incense, oil lamps, etc. produce combustion byproducts including soot. Vent-free appliances will not filter or clean soot produced by these types of products. In addition, the smoke and/or aromatics (scents) may be reburnt in the vent-free appliance which can produce odors. It is recommended to minimize the use of candles, incense, etc. while the vent-free appliance is in operation.
15. This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. See page 8.

continued on page 4

IMPORTANT SAFETY INFORMATION

continued from page 3

16. Keep room area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
17. Unvented gas heaters are a supplemental zone heater. They are not intended to be the primary heating appliance.
18. Unvented gas heaters emit moisture into the living area. In most homes of average construction, this does not pose a problem. In houses of extremely tight construction, additional mechanical ventilation is recommended.
19. During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance; possibly causing headaches or eye or lung irritation. This is a normal and temporary occurrence.
The initial break-in operation should last four hours to properly cure logs and rock wool, with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in period will be slight and will disappear with continued use.
20. Input ratings are shown in BTU per hour and are for elevations up to 2,000 feet. For elevations above 2,000 feet, input ratings should be reduced 4 percent for each 1,000 feet above sea level. Refer to the National Fuel Gas Code.
21. The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).
22. The appliance must be isolated from the gas supply piping system by closing its equipment shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).
23. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
24. This appliance must not be used with glass doors in the closed position. This can lead to pilot outages and severe sooting outside the fireplace.
25. Never burn solid fuels in a fireplace where a unvented room heater is installed.
26. Always have a fireplace screen in place when the appliance is in operation and, unless other provisions for combustion air are provided, the screen must have an opening(s) for induction of combustion air.

WARNING

Never connect unit to private (non-utility) gas wells. This gas is commonly known as wellhead gas.



We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

MASSACHUSETTS RESIDENTS ONLY:
Please refer to Pages 40 & 41 for additional information.

MAKE SURE YOU HAVE RECEIVED ALL PARTS:

Check your packing list to verify that all listed parts have been received. You should have the following:

- Unvented Gas Log Burner Assembly
- Installation/Operating Instructions
- Ceramic Fiber Logs
- FAI135 Andiron Kit
- RCSIT Hand Held Remote with Receiver
- Two (2) Plastic Bags Containing Crushed Volcanic Rock
- Two (2) Anchoring Screws
- Rock wool
- Flickering Bright Embers

CAUTION

Gloves are recommended when handling ceramic fiber logs to prevent skin irritation from loose fibers. Logs are fragile — handle with care.

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately inform the dealer from whom you purchased the appliance. **Do not attempt to install any part of the appliance unless you have all parts in good condition.**

WHAT YOU WILL NEED FOR INSTALLATION:

You should have the following items available before proceeding with installation:

- External regulator (for propane/LPG and 1/2 lb. natural gas systems only)
- Piping which complies with local codes
- Screwdriver
- Pipe sealant approved for use with propane/LPG (Resistant to sulfur compounds)
- Drill with 5/32 masonry bit
- Manual shutoff valve
- Sediment trap (recommended)
- Tee joint.
- Pipe wrench or appropriate size crescent wrench set

PRODUCT FEATURES and SPECIFICATIONS

NATURAL GAS

NOTE: An external regulator is required to reduce supply pressure to a maximum of 10 1/2" W.C. on natural gas systems operating at higher pressure.

MILLIVOLT

Regulator Pressure Setting: 3.5" w.c.
Pilot Regulator: 3.5" w.c.
Gas Inlet Pressure: Max 10 1/2" w.c.
Min. 5" w.c.

Model Number	Control	Gas Rate	
		Max. BTU/hr	Min. BTU/hr
MJ27NR	Millivolt	38,000	25,500

PROPANE/LPG

Note: An external regulator is required to reduce supply pressure to a maximum of 13" w.c.

MILLIVOLT

Regulator Pressure Setting: 10" w.c.
Gas Inlet Pressure: Max. 13" w.c.
Min. 11" w.c.

Model Number	Control	Gas Rate	
		Max. BTU/hr	Min. BTU/hr
MJ27PR	Millivolt	37,000	29,500

IGNITION CONTROLS

Piezo ignitor allows ignition of the pilot without the use of matches or batteries.

Millivolt control has three (3) positions:

- | | |
|-----|------------------------------------------------------------------------|
| OFF | - All gas to the gas logs is shut off at the valve. |
| IGN | - Valve position to light/maintain a standing pilot. |
| ON | - Valve position to turn ON/OFF log set with remote switch/thermostat. |

PILOT/ODS

The gas log heater is fitted with a specially designed safety pilot (ODS assembly) which senses the amount of oxygen available in the room and shuts the gas log heater off if the oxygen level begins to drop below a satisfactory level. The pilot can only be relit when adequate fresh air is available.

THERMAL GENERATOR

The millivolt gas log pilot is fitted with a Millivolt (thermopile) generator to provide power for remote activation.

GENERAL INSTALLATION INFORMATION

CODES

Adhere to all local codes or, in their absence, the latest edition of THE NATIONAL FUEL GAS CODE ANSI Z223.1 or NFPA54 which can be obtained from...

American National Standards Institute, Inc.

1430 Broadway
New York, NY 10018

or

National Fire Protection Association, Inc.

Batterymarch Park
Quincy, MA 02269

ADEQUATE COMBUSTION AND VENTILATION AIR

This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air.

The National Fuel Gas Code, (ANSI Z223.1/NFPA 54), defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 BTU per hour (4.8 m^3 per kw) of the aggregate input rating of all appliances installed in that space. An unconfined space is defined as a space whose volume is not less than 50 cubic feet per 1,000 BTU per hour (4.8 m^3 per kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the unconfined space.

UNUSUALLY TIGHT CONSTRUCTION IS DEFINED AS CONSTRUCTION WHERE...

- a) walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of 1 perm ($6 \times 10^{11} \text{ kg per pa-sec-m}^2$) or less with openings gasketed or sealed;
- b) weather striping has been added on openable windows and doors, and
- c) caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

GENERAL INSTALLATION INFORMATION

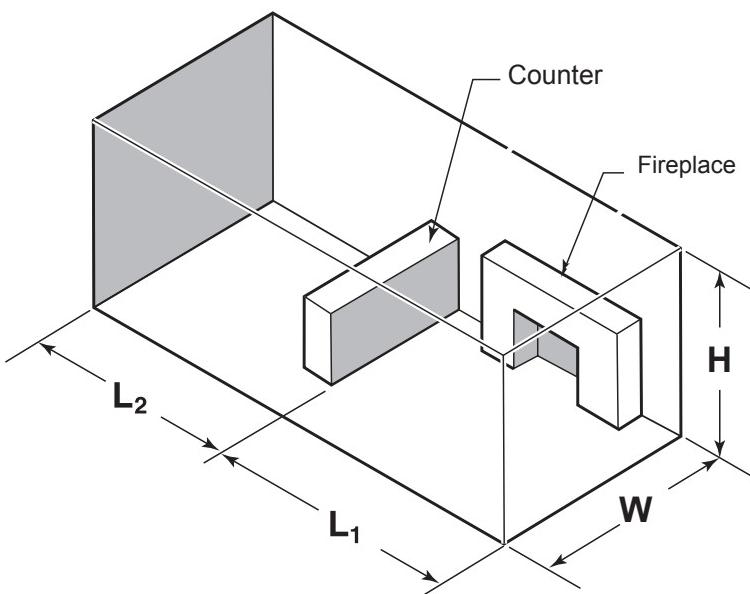


Figure 1 - Example of a Large Room with 1/2 Wall Divider

The following formula can be used to determine the maximum heater rating per the definition of unconfined space:

$$\text{BTU/hr} = \frac{(L_1 + L_2) \text{ Ft} \times (W) \text{ Ft} \times (H) \text{ Ft.}}{50} \times 1000 \text{ BTU/hr}$$

Consider two connecting rooms with an open area between, with the following dimensions:

$$L_1 = 15\frac{1}{2} \text{ Ft.}, L_2 = 12 \text{ Ft.}, W = 12 \text{ Ft.}, H = 8 \text{ Ft.}$$

$$\text{BTU/hr} = \frac{(15\frac{1}{2} + 12) \times (12) \times (8)}{50} \times 1000 = 52800 \text{ BTU/hr}$$

If there were a door between the two rooms the calculation would be based only on the room with the heater.

$$\text{BTU/hr} = \frac{(15\frac{1}{2}) \times (12) \times (8)}{50} \times 1000 = 29760 \text{ BTU/hr}$$

WARNING

If the area in which the heater may be operated is smaller than that defined as an unconfined space or if the building is of unusually tight construction, provide adequate combustion and ventilation air by one of the methods described in the National Fuel Gas Code, ANSI Z223.1/NFPA 54, Section 5.3 or applicable local codes.

WARNING

This appliance is for installation only in a solid-fuel burning masonry or UL127 factory-built fireplace, vent free appliance, or in listed ventless firebox enclosure. It has been design certified for these installations.

Exception: DO NOT install this appliance in a factory-built fireplace that includes instructions stating it has not been tested or should not be used with unvented gas logs.

Use manufacturer's installation and clearance requirements as defined in their manual.

The MJ Series unvented room heater is approved for installation into the following unvented fireplaces:

GCUF Series Fireboxes Magnum36/42, Lo-Rider36 or BUF

The MJ Series unvented room heater may also be installed into a Ventless Firebox Enclosure for Gas Fired Decorative Type Unvented Room Heaters per IAS Requirement No. 2-97 ANSI Z21.91-2001 (typically referred to as a "Universal Firebox"), as long as firebox hearth dimensions meet the minimum hearth dimensions shown below.

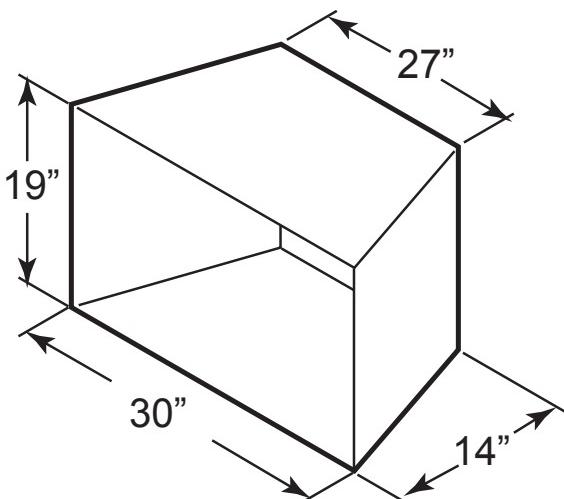


Figure 2 - Minimum Hearth Dimension

PLACEMENT IN A FIREPLACE WITH A RESTRICTIVE BARRIER

IMPORTANT INFORMATION FOR THE INSTALLATION OF THIS GAS LOG SET

The following are guidelines for placing a gas log set in a fireplace that has a restrictive barrier along the bottom front opening of the fireplace. Some examples of barriers are glass/screen door frames and sunken/recessed fireplaces.

Height of Restriction (X)	Minimum Depth of Fireplace/Firebox
No restriction	14"
0 to 1½"	17"
From 1½" to 3"	17"
Greater than 3"	ANY BARRIER GREATER THAN THREE INCHES (3") PLACED IN FRONT OF THE GAS LOG SET IS NOT RECOMMENDED BY THE MANUFACTURER.

Glass door frames with adjustable louvers should have the louvers **fully open** while the unit is in operation.

The log set should be placed against or as near as possible to the rear wall of the fireplace/firebox.

Height of restrictive barrier caused by glass door frames, recessed fireplaces, etc. from the base or bottom surface of the unit. (Refer to Table).

NOTE

Anytime there is a restrictive barrier of more than 1½", the remote receiver should be located outside the firebox.

Depth of fireplace/firebox.
(Refer to Table).

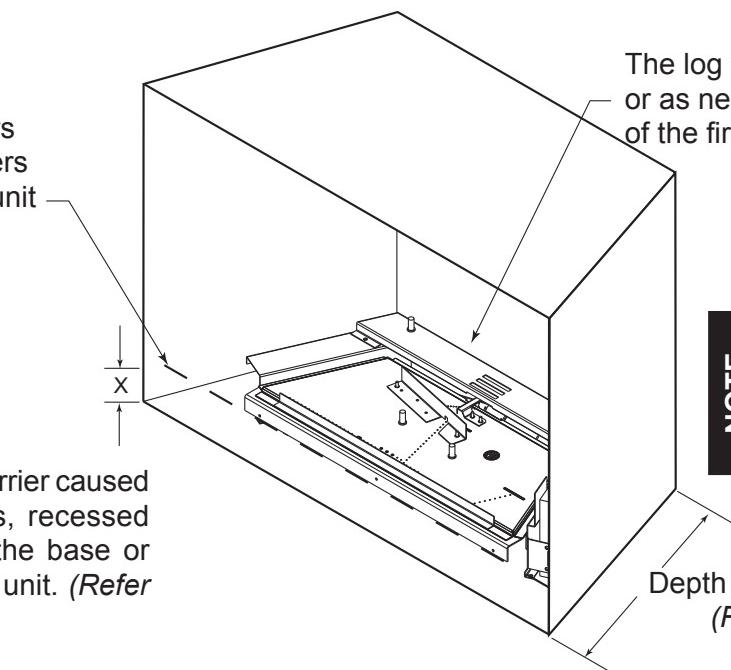


Figure 3 - Reference Drawing of the MJ27 Log Set in an Enclosure

WARNING

Barriers such as the bottom of a glass door frame placed in front of a gas log set can change the air flow characteristics of the fireplace which in turn can cause the unit to overheat and malfunction.

NOTE: Noncombustible material such as refractory brick may be used to line the floor of the fireplace in order to raise the height of the gas log set in relation to a restrictive barrier. If the unit is raised, the minimum height dimension listed in the homeowner's manual must not be exceeded.

NOTE: If the log set is equipped with a remote receiver, a restrictive barrier may reduce the battery life by increasing the ambient temperature inside the fireplace. Placement of the receiver outside of the fireplace will extend the battery life.

CLEARANCES and HEIGHT REQUIREMENTS

WARNING

The dimensions shown in *Figures 4 through 11* and defined in the fireplace manufacturer's instructions are minimum clearances to maintain when installing this heater. Left and right clearances are determined when facing the front of the heater.

When heater is installed into a ventless firebox, minimum clearances, as specified by the ventless firebox manufacturer, must be met.

Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.

Sidewall and ceiling clearances: The **sides** of the fireplace opening must be **at least 16"** from any combustible wall. The **ceiling** must be **at least 42"** from the top of the fireplace opening.

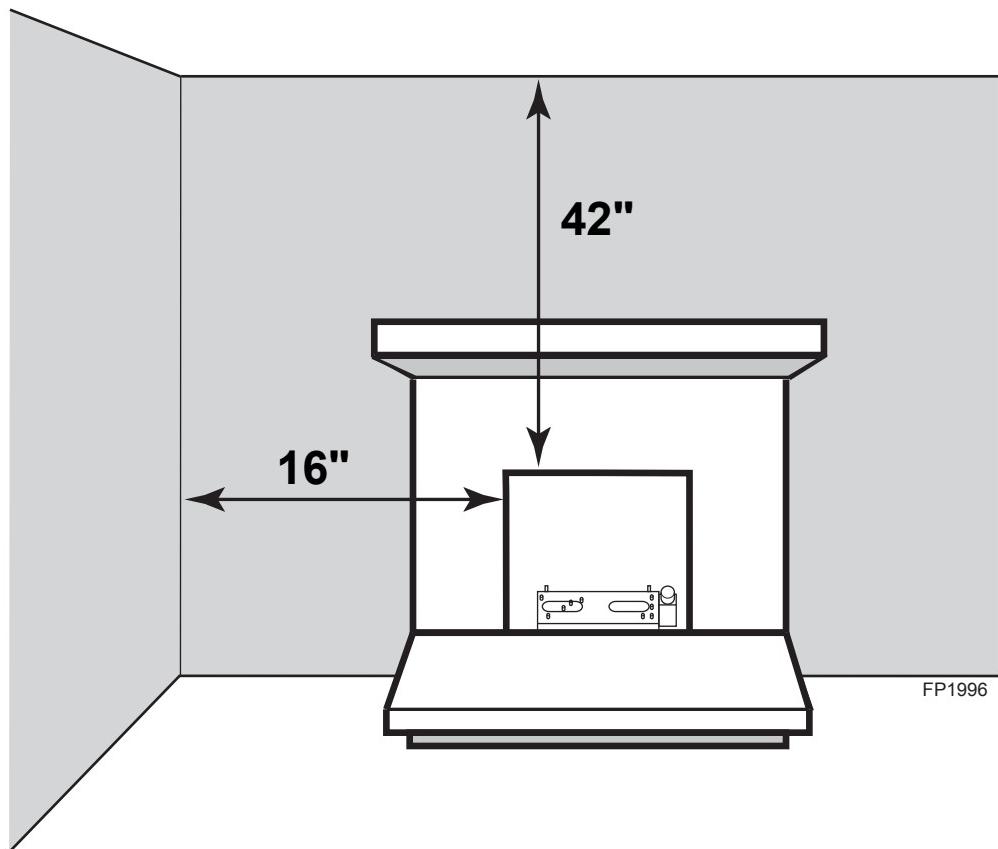


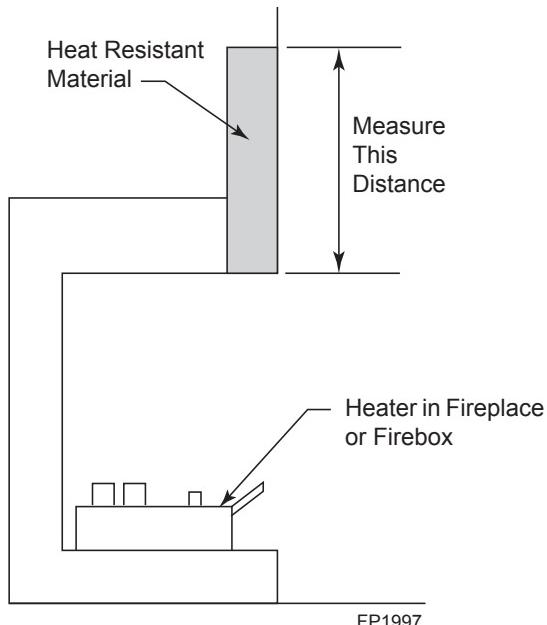
Figure 4 - Sidewall and Ceiling Clearances

CLEARANCES and HEIGHT REQUIREMENTS

Heat resistant material (minimum requirements) with no wooden mantel or other combustible projection:

To install the gas logs into a fireplace with no wooden mantel, shelf or other combustible projection above the fireplace opening, measure the heat resistant material height, per *Figure 5*, then see **TABLE A**.

Heat resistant materials such as slate and marble must be at least 1/2" thick. Sheet metal should not be installed onto combustible material.



FP1997

Figure 5 - Measuring Heat Resistant Material

Heat Resistant Material Measurement	Requirements for Safe Installation
	MJ27
12" or more	Hood not required
8" to less than 12"	Extend heat resistant material to 12" OR install hood. Refer to Figure 5
Less than 8"	Extend heat resistant material to 8" AND install hood. Refer to Figure 5. OR , extend heat resistant material to a height of at least 12"

TABLE A - Heat Resistant Material Requirements with no Mantel or Combustible Projection

CLEARANCES and HEIGHT REQUIREMENTS

Heat resistant material (minimum requirements) with wooden mantel or other combustible projection:

To install the heater with a wooden mantel, shelf or other combustible projection above, first measure the heat resistant material shown in *Figure 6*, then refer to Table B.

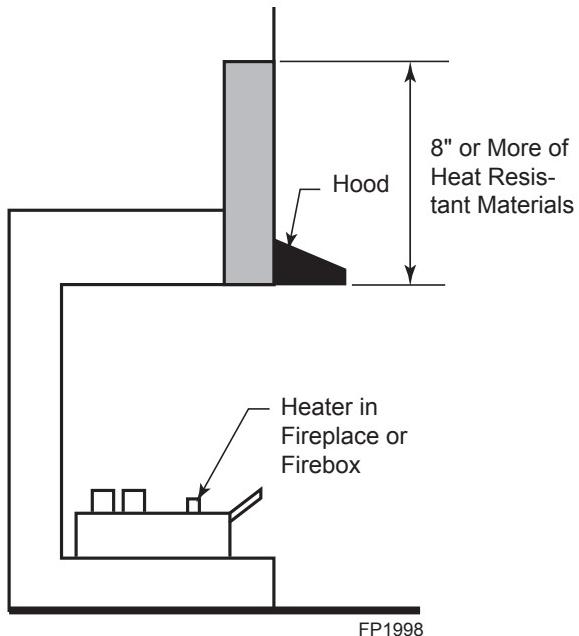
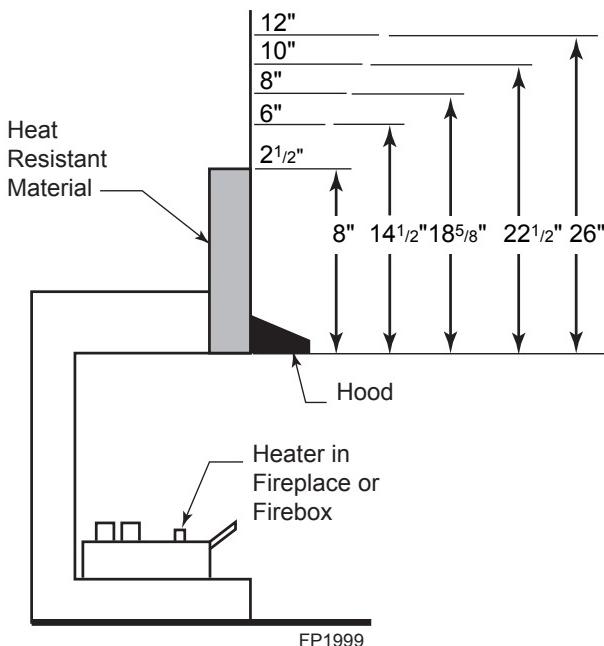


Figure 6 - Measuring Heat Resistant Material for Mantel

Heat Resistant Material Measurement	Requirements for Safe Installation with Wood Mantel, Shelf or Other Combustible Projection
	MJ27
12" or more	Hood not required. Observe profile (side elevations) shown on Page 14, <i>Figure 8</i> .
8" to less than 12"	Install hood and observe profiles shown on Page 14, <i>Figure 7</i> ; OR extend heat resistant material to at least 12" and observe profiles shown on Page 14, <i>Figure 8</i> .
Less than 8"	Extend heat resistant material to at least 8", install hood and observe profiles shown on Page 14, <i>Figure 7</i> ; OR extend heat resistant material to at least 12" and observe profiles on Page 14, <i>Figure 8</i> .

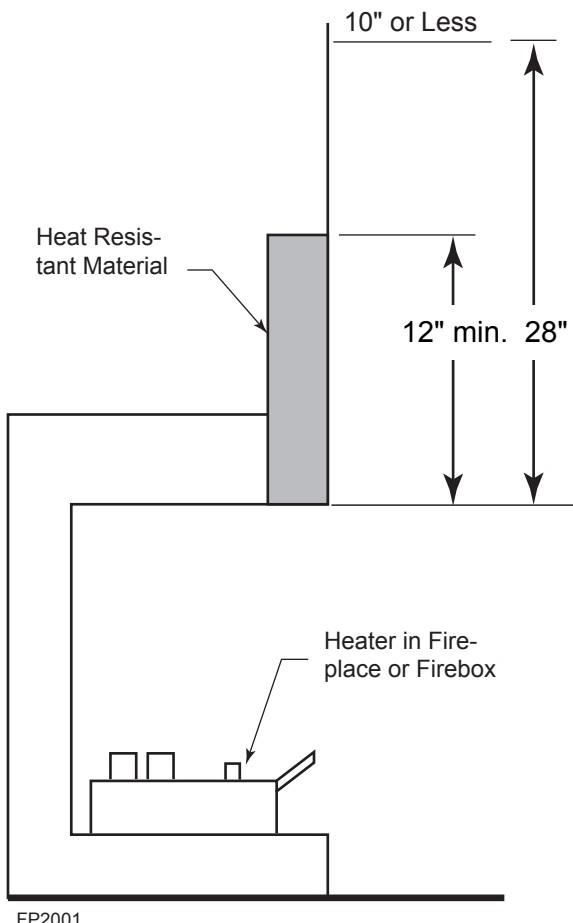
TABLE B - Heat Resistant Material Heights and Mantel Location

CLEARANCES and HEIGHT REQUIREMENTS



Example: A mantel may project from the wall a **maximum** of $2\frac{1}{2}$ " at a **minimum** of 8" above the opening, and a maximum of 6" at a **minimum** of $14\frac{1}{2}$ " above the opening.

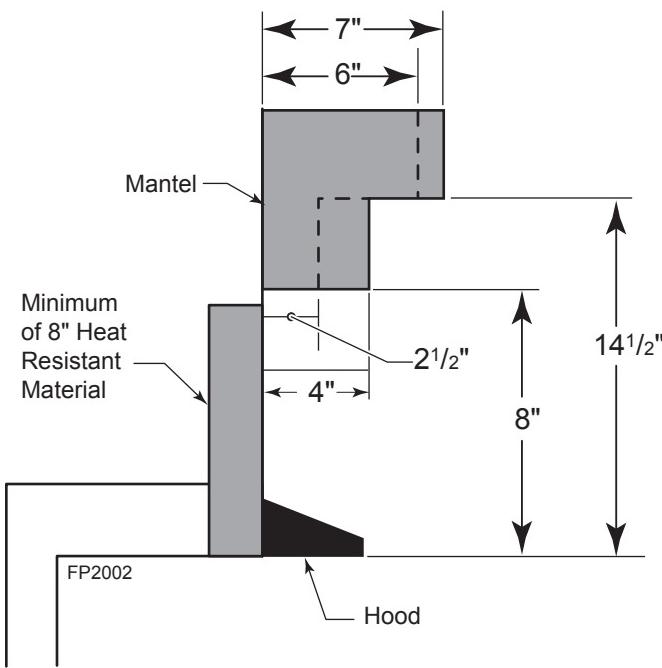
Figure 7 - Minimum Mantel Clearance with Hood - All Models



Example: The bottom of the mantel may project from the wall a maximum of 10" at a minimum of 28" above the opening.

Figure 8 - Minimum Mantel Clearance with No Hood — MJ27

CLEARANCES and HEIGHT REQUIREMENTS



**Figure 9 - Minimum Mantel Clearance with Hood - MJ27
(Example of Unsafe Installation)**

Figure 9 is an example of an unsafe mantel installation. This mantel projects 4" at 8" above the opening, exceeding the maximum acceptable distance of 2½". The mantel also projects 7" at 14½" above the opening, exceeding the maximum acceptable distance of 6".

If your mantel profile is unsafe, you may either:

- Raise the mantel to an acceptable height
- OR
- Remove the mantel

FLOOR CLEARANCE

The gas log heater must be installed at least $1\frac{3}{8}$ " above any combustible flooring material, such as carpeting or tile, which is closer than 14" to the base of the fireplace. The minimum distance must be maintained from the top surface of carpeting, tile, etc. *Figure 10*

OR

The gas log heater may be installed nearer to the floor if a minimum of 14" of noncombustible material such as slate or marble is installed between the base of the fireplace and the combustible flooring. *Figure 11*

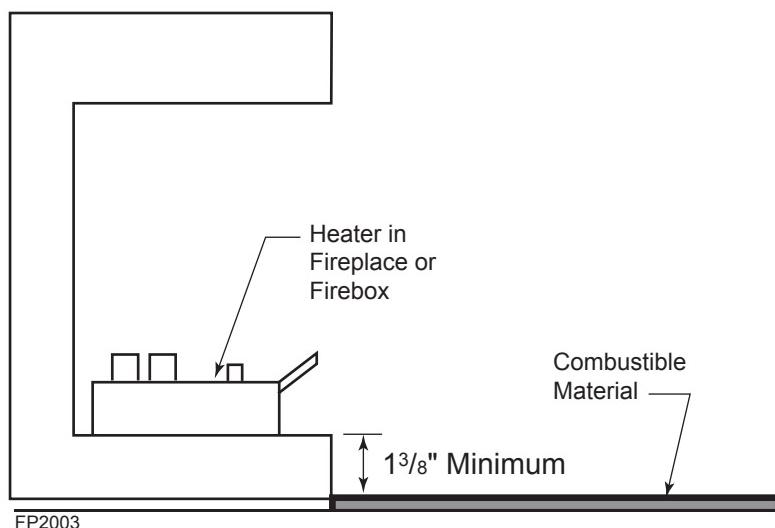


Figure 10 - Minimum Clearance above Combustible Flooring

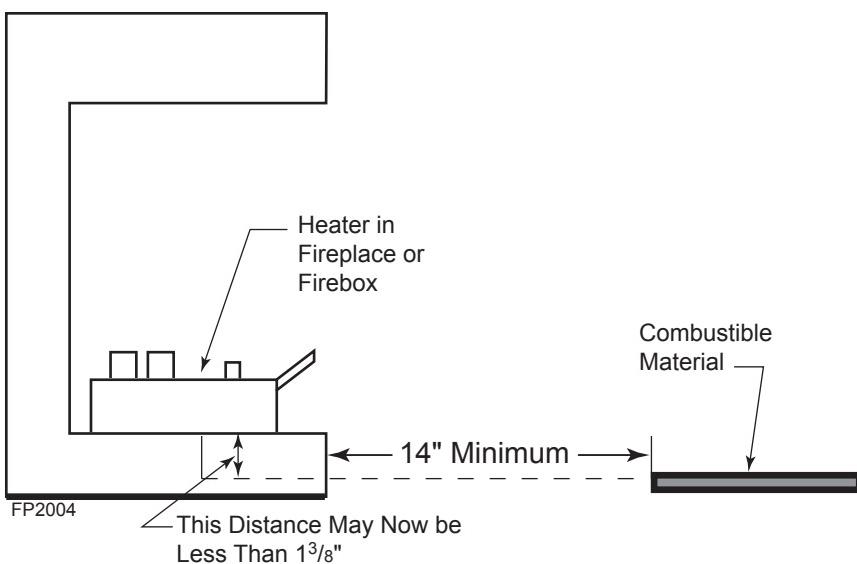


Figure 11 - Minimum Clearance above Combustible Flooring with Noncombustible Material Installed at Base of Fireplace

BEFORE FULLY INSTALLING THE UNIT:

- Turn **OFF** the gas supply to the fireplace or firebox.
- Seal any fresh air vents and/or ash clean-out doors located on the floor or wall of the fireplace. If left unsealed, drafting may cause pilot outage or sooting. Use a heat resistant sealant. **Do not seal the chimney flue damper.**

WARNING

Before installing in a solid fuel burning fireplace, The chimney flue and firebox must be cleaned of soot, creosote, ashes and loose paint by a qualified chimney cleaner.

PLACING AND SECURING APPLIANCE

WARNING

You must secure the gas log heater to the fireplace floor. If not, the entire unit may move when you adjust the controls. Movement of unit may cause shifting of the gas logs which leads to sooting and improper burning. Grate movement could cause a gas leak.

Special care is required if you are installing the unit into a sunken fireplace. You must raise the fireplace floor to allow access to gas log controls. This will insure adequate air flow and guard against sooting. Raise the fireplace floor using noncombustible materials, as described in Placement in a Fireplace with Restrictive Barrier on Page 10.

FIREPLACE PREPARATION

ASSEMBLY PROCEDURE:

1. Center the gas log unit on the fireplace or firebox. Make certain the front of the burner sits inside the front edge of the fireplace or firebox.
2. Anchor holes are located on the right and left sides of the unit. After centering the burner correctly, mark the hole positions on the fireplace/firebox floor. Drill two (2) 5/32" diameter holes approximately 1 $\frac{1}{2}$ " deep.
3. Anchor the burner to the fireplace/firebox floor using the screws provided. *Figure 13*

Proper installation of the heater is essential to prevent any movement of the gas logs and controls during operation.

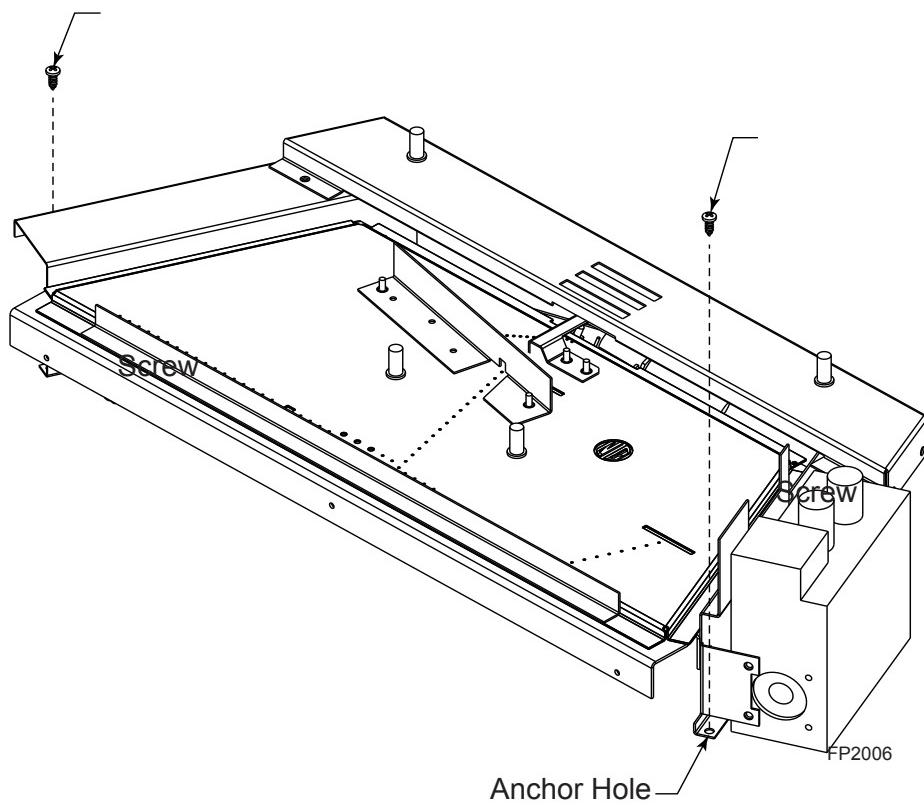


Figure 13 - Secure Heater to Floor of Fireplace/Firebox

NOTICE: A qualified gas appliance installer must connect the heater to the gas supply. Consult all local codes.

CAUTION

Use new black iron or steel pipe. Internally tinned copper or copper tubing can be used per National Fuel Code, section 2.6.3, providing gas meets hydrogen sulfide limits, and where permitted by local codes. Gas piping system must be sized to provide minimum inlet pressure (Listed on Data Plate) at the maximum flow rate (BTU/Hr). Undue pressure loss will occur if the pipe is too small.

A manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance. *Figure 14*

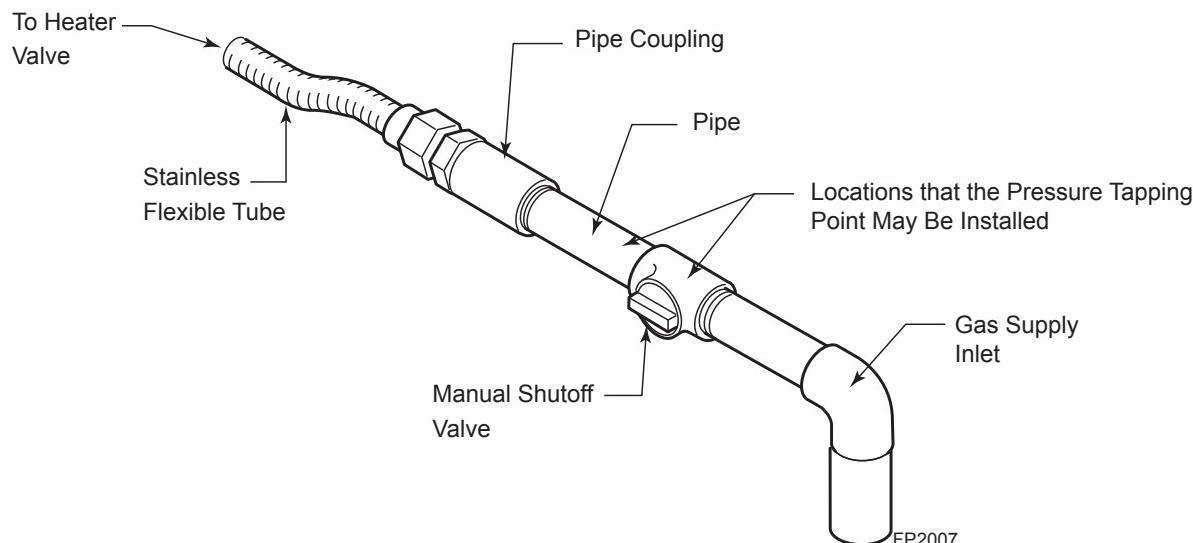


Figure 14 - Gas Connection

IMPORTANT: Hold heater valve firmly with a wrench to prevent movement when connecting to inlet pipe.

CAUTION

CHECK GAS TYPE: The gas supply must be the same as stated on the heater's rating plate. If the gas supply is different, DO NOT INSTALL THE HEATER. Contact your dealer for the correct model.

Always use an external regulator for all propane/LPG heaters and high pressure one to two-pound systems only, to reduce the supply tank pressure to a maximum of 13" w.c. This is in addition to the internal regulator in the heater valve.

CHECKING GAS PRESSURE

WARNING

Connecting directly to an unregulated propane/LPG tank can cause an explosion.

The heater gas inlet connection is a 3/8" NPT at the valve. On all control type units, the inlet connection is on the right side of unit. To connect from the opposite side, route the pipe around the back portion of the unit.

When tightening up the joint to the valve, hold the valve securely to prevent movement.

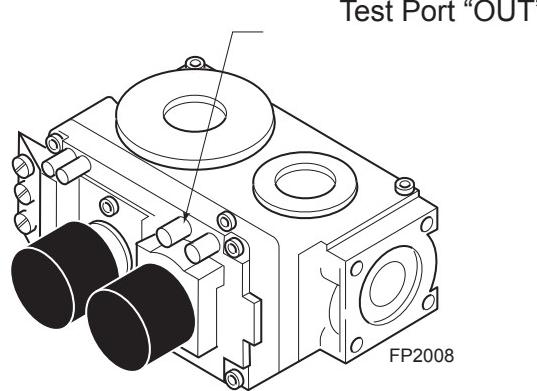
Test all gas joints from the gas meter to the heater valve for leaks using a gas analyzer or soap and water solution after completing connection. **DO NOT USE AN OPEN FLAME.**

Check the gas pressure with the appliance burning and the control set to **HIGH**.

MILLIVOLT VALVE CONTROL (*Figure 15*)

The valve regulator controls the burner pressure which should be checked at the pressure test point.

Turn captured screw counter clockwise two or three turns and then place tubing to pressure gauge over test point (Use test point "OUT" closest to control knob). After taking pressure reading, be sure and turn captured screw clockwise firmly to re-seal. Do not over torque. Check for gas leaks.



**Figure 15 - Pressure Test Point Location
Millivolt Control**

ELECTRICAL WIRING (MILLIVOLT)

The Millivolt valve is a self-powered combination gas control **THAT DOES NOT REQUIRE 110 VAC TO OPERATE.**

CAUTION

Label all wires prior to disconnection when servicing controls.
Wiring errors can cause improper and dangerous operation. Verify
proper operation after servicing.

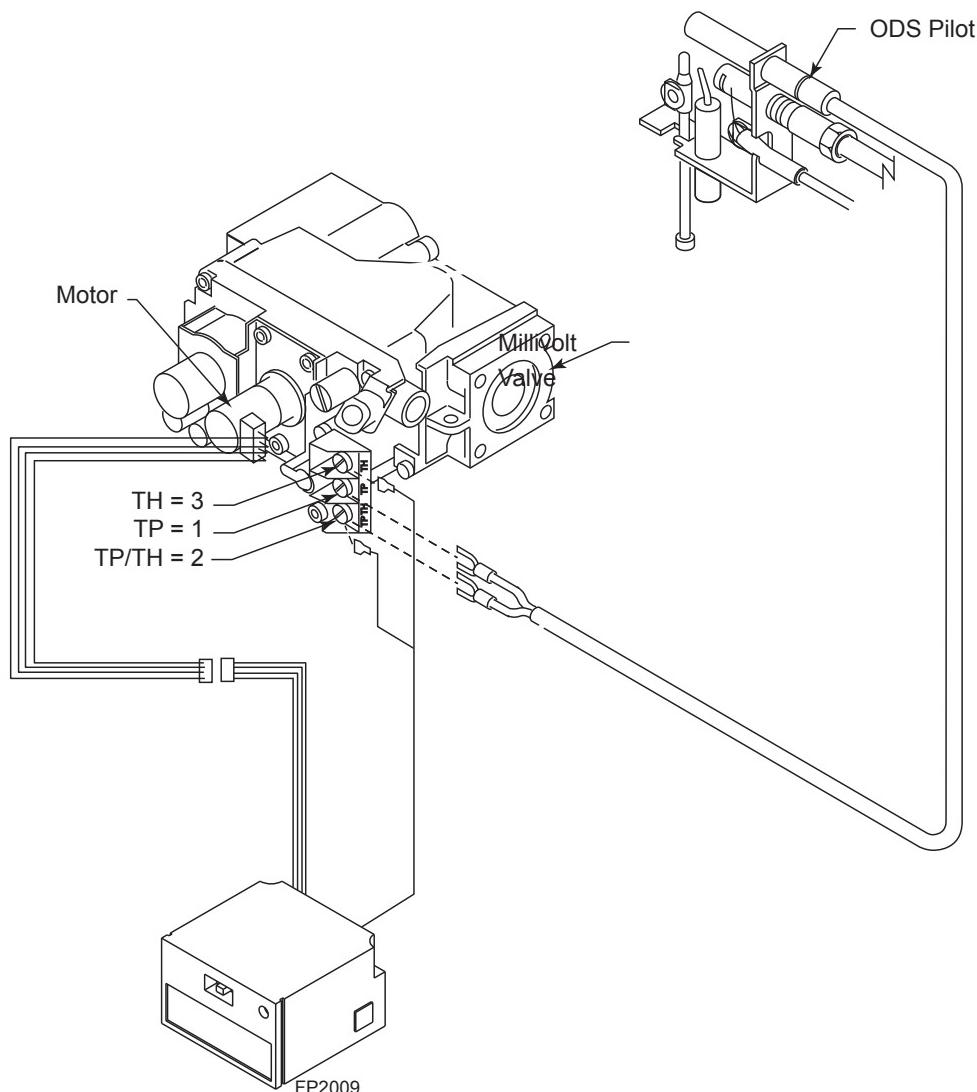


Figure 16 - Wiring Diagram

ELECTRICAL WIRING (MILLIVOLT)

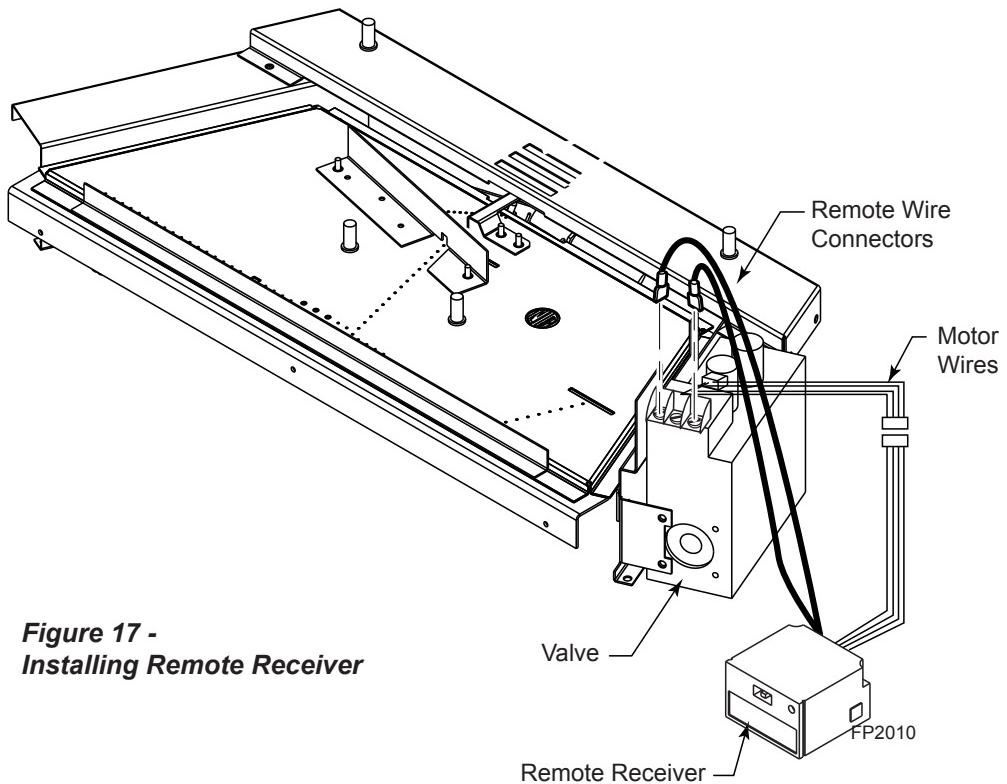
CONNECTING REMOTE RECEIVER

1. Set remote receiver. See instructions included in receiver kit.
2. Connect the two (2) 1/4" female connectors to the TP/TH and TH terminals on the control valve.
3. Connect the four-pin connector from the valve motor to the four-pin connector on the receiver.
4. For further instruction refer to instruction sheet included with RCSIT Remote.

NOTICE

Do not allow wires to touch grate or burner.

**Figure 17 -
Installing Remote Receiver**



Note: Heat reduces battery life. You can protect the receiver and extend battery life by mounting receiver in wall or other location outside the fireplace.

CHECKING SYSTEM OPERATION

The Millivolt system and individual components may be checked with a Millivolt meter having a 0-1000 mV range. Conduct each check shown in chart below by connection meter test leads to terminals as indicated.

CHECK TEST	TO TEST	CONNECT METER LEADS TO TERMINALS	SWITCH OR THERMOSTAT CONTACTS	METER READING SHOULD BE
A	COMPLETE SYSTEM	2 & 3	CLOSED	MINIMUM 175
B	THERMOPILE OUTPUT	1 & 2	OPEN	MINIMUM 500

A. COMPLETE MILLIVOLT SYSTEM CHECK

(“A” Reading - Thermostat contacts CLOSED - Control Knob “ON” - Main burner should turn ON)

- a. If the reading is more than 175 Millivolts and the automatic valve still does not come on, replace the control.
- b. If the closed circuit reading (“A” reading) is less than 175 Millivolts, determine cause for low reading, proceed to Section B below.

B. Thermopile Output Reading Check

(“B” Reading - Thermostat contacts OPEN - Main burner OFF)

1. Check gas pressure to the unit. If gas pressure is within minimum and maximum on data plate, then check pilot voltage, 500 Millivolts minimum. If the minimum Millivolt reading is not obtainable, replace pilot.

Before you begin — This unit is supplied with seven (7) ceramic fiber logs. Do not handle these logs with your bare hands. **Always wear gloves to prevent skin irritation from ceramic fibers.** After handling the logs, wash your hands gently with soap and water to remove any traces of fibers.

WARNING

The positioning of the logs is critical to the safe and clean operation of this heater. Sooting and other problems may result if the logs are not properly and firmly positioned in the appliance. Never add additional logs or embellishments such as pine cones, vermiculite or rock wool to the heater. Only use the logs and 2G-RW rock wool.

Failure to position the parts in accordance with diagrams below or to use only parts specifically approved for this heater may result in property damage or personal injury.

PLACE ROCK WOOL

Before installing logs, place rock-wool in dime size pieces evenly over small burner ports starting in front of the rear deflector shield towards the front. Avoid placing rock wool over the slots on rear and right side of burner and on large yellow flame ports on front of burner.

Wash hands after placing rock wool. Itching may occur.

WARNING

- Use only rock wool provided with log set.
- Do not add additional rock wool.

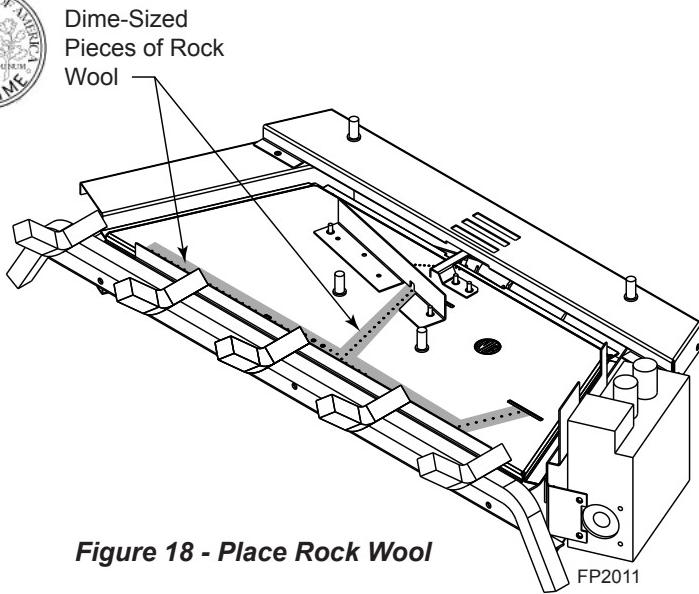


Figure 18 - Place Rock Wool

FP2011



Figure 19 - Correct Rock Wool Placement

LOG PLACEMENT



1. Place log #8 on right bracket next to valve by sliding grooves on sides of log into cutout on brackets. *Figure 20*

**Figure 20 -
Install Log #8**

LG553

2. Place log #1 by setting the log over the rear bracket over the two pins. *Figure 21*

**Figure 21 -
Install Log #1**



LG554



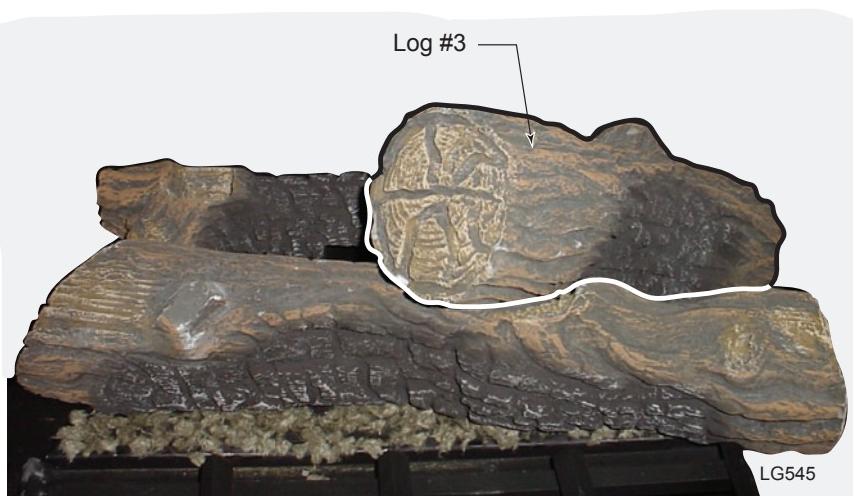
3. Place log #2 at an angle across the burner by setting the log over the two pins located on top of the burner. *Figure 22*

**Figure 22 -
Install Log #2**

LG555

4. Place log #3 at an angle over log #2 toward the back by matching the rectangular notch on the bottom of this log with the rectangular protrusion on log #2. Set the notch located on the bottom of this log toward the back over the metal bracket located to the right side of the burner. *Figure 23*

**Figure 23 -
Install Log #3**



LG545

LOG PLACEMENT

5. Place Log #4 by matching the rectangular protrusion on the bottom of this log over the rectangular notch on log #3. Swing the log slightly to the front and set the log over the notch located on the upper surface of log #3. *Figure 24*



**Figure 24 -
Install Log #4**

6. Place log #5 by matching the rectangular notch on the bottom of the log with the rectangular protrusion on log #2. Set the notch on the bottom of this log over the very far left tong on the grate. *Figure 25*



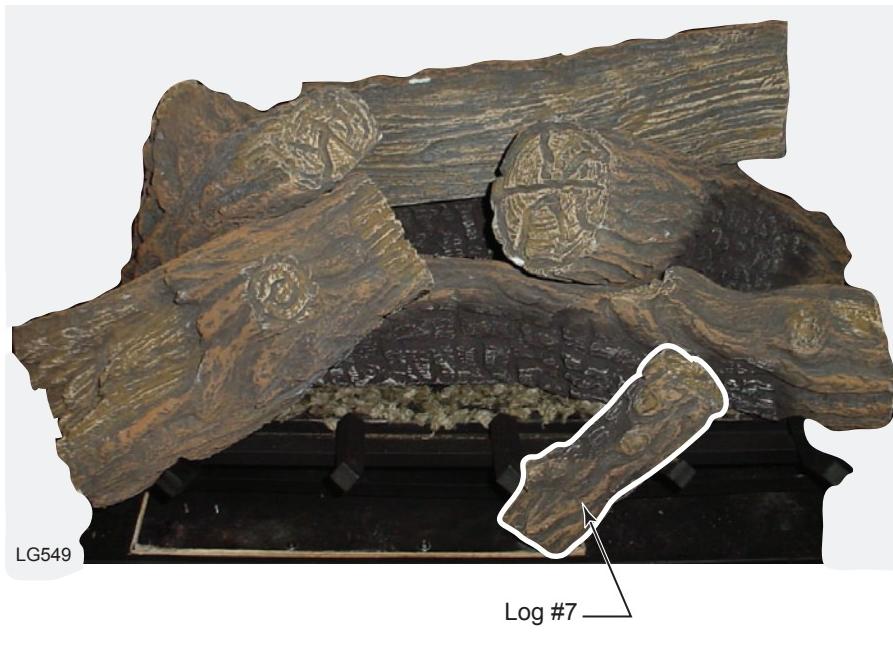
**Figure 25 -
Install Log #5**

7. Place log #6 at an angle over log #5 toward the back by matching the rectangular notch on the bottom of this log with the rectangular protrusion on log #5. Set the notch located on the bottom of this log toward the back over the metal bracket located to the left side of the burner. *Figure 26*



**Figure 26 -
Place Log #6**

LOG PLACEMENT



8. Place log #7 between the second and third right tong on the grate as shown in *Figure 27*.

**Figure 27 -
Place Log #7**

PLACE FLICKERING EMBERS

Place flickering bright embers (FBE-1G) after placing logs on burner. Pull apart into small strands and place on top of existing rock wool in front of and between front logs where they can be seen. Try to avoid stacking these embers on top of each other. Use smaller, stringier strands for maximum effect. Use as much as needed until desired effect is achieved.

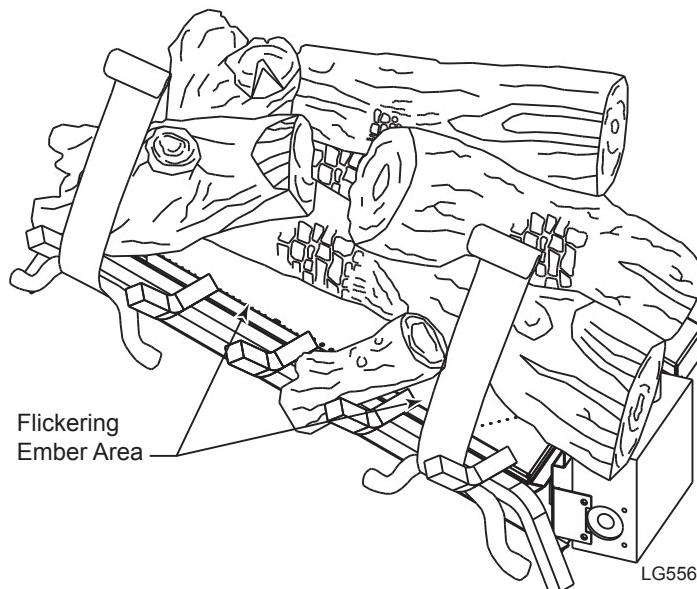


Figure 28 - Place Flickering Bright Embers

ANDIRON INSTALLATION

2, Andirons
2, Brackets
2, 2¹/₄ Bolts

Assembly Instructions

1. Affix bracket to andiron using 2¹/₄ bolts. *Figure 29*
2. The andiron bracket clips over the lower horizontal grate bar. *Figure 30*
3. The left andiron goes to the left of the large knot on the front left log. The right andiron will adjust left to right to center equally in fireplace.

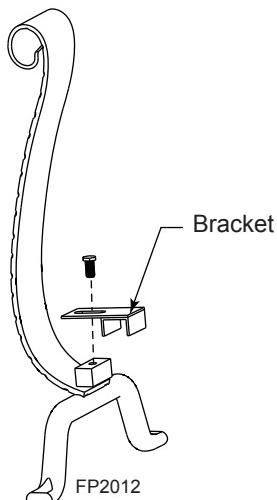


Figure 29 - Attach Bracket to Andiron

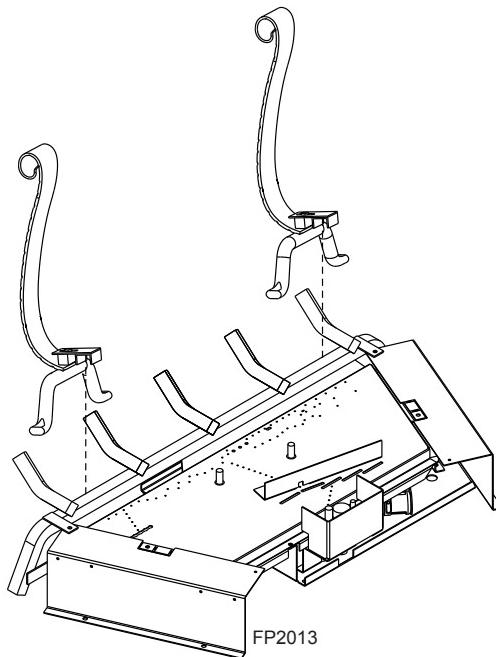


Figure 30 - Attach Andirons to Grate

PLACING THE DECORATIVE ROCK

CAUTION

DO NOT sprinkle volcanic rock on the logs, around the pilot, or on or near burners. This may cause sooting. Place volcanic rock only on the floor of the fireplace.

During initial operation of the new heater, new burning logs and/or rock wool will give off a paper burning smell and orange flames will be present. Simply open the windows for a few hours to vent the odor.

FLAME APPEARANCE

Flames from the pilot and burner should be visually checked as soon as the heater is installed. In addition, periodically check the flames visually during operation.

CHECKING THE PILOT FLAME

The pilot flame must always be present when the heater is in operation. It should just touch the top of the thermocouple tip for natural. *Figure 31* for correct pilot flame.

If the pilot flame does not touch the thermocouple, then the main burner cannot function reliably. Refer to *Figure 32* for incorrect shape of pilot flame.

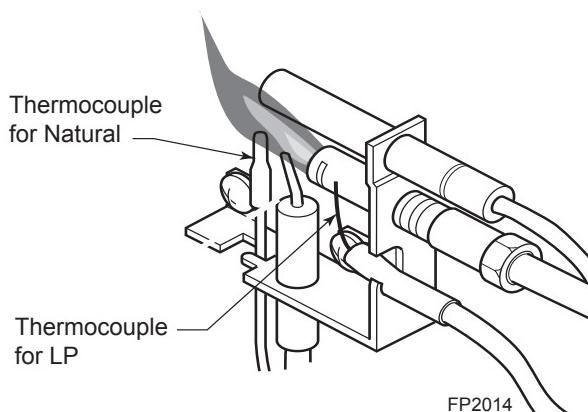


Figure 31 - Correct Appearance of Pilot Flame

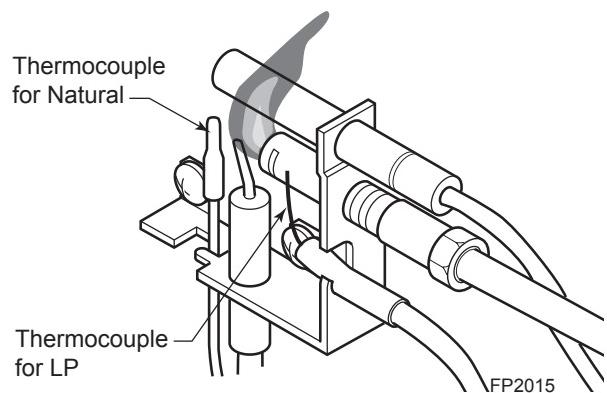


Figure 32 - Incorrect Appearance of Pilot Flame

CHECKING THE BURNER FLAME

In normal operation at full rate after 15 minutes, the following flame appearances should be observed:



Figure 33 - Correct Burner Flame Appearance

Burner will have a random pattern of yellow flames as shown in *Figure 33*. There should be glowing embers on the front burner. **Note: The front flames and embers will be an opaque orange color during the burn off time.**

OPERATING INSTRUCTIONS

Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into the fireplace. Do not place a blower inside the burn area of the firebox. Ceiling fans may create drafts that alter flame patterns. Sooting and improper burning will result.

During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful, but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance, possibly causing headaches or eye or lung irritation. *This is a normal and temporary occurrence.*

The initial break-in operation should last four hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in will be slight and will disappear with continued use.

This appliance must not be used with glass doors in the closed position. This can lead to pilot outages and severe sooting outside the fireplace. Refer to Page 10, *Figure 3*.

OPERATING INSTRUCTIONS

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING

If you do not follow these instruction exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance is equipped with a piezo ignition device which lights the pilot. If piezo is not working properly see *Match Lighting Instructions, Page 32*.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:

- Do not attempt to light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in, or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part of it has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

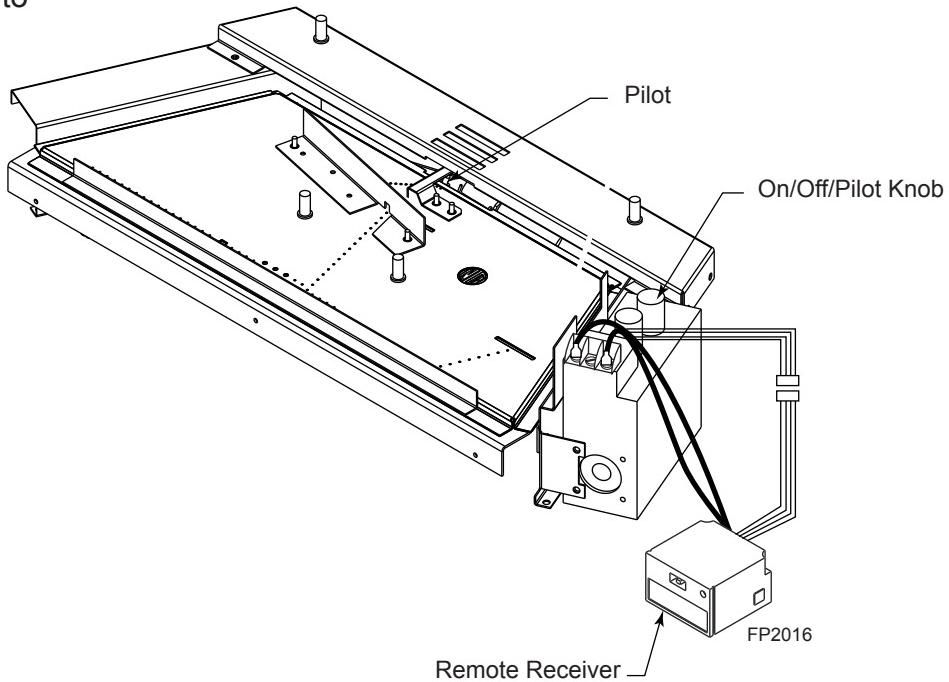


Figure 34 - Location of Piezo Ignitor, Control Knobs and Switch

Millivolt CONTROL LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information label.
2. Make sure the manual shutoff valve is fully open.
3. This gas log set is equipped with an ignition device (piezo) which automatically lights the pilot. If piezo ignitor does not light the pilot, refer to instructions for *Match Lighting Instructions, Page 30*.
4. Turn gas control knob clockwise to the OFF position and turn ON/OFF switch to OFF position.
5. Wait (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow the instructions under *What To Do If You Smell Gas, Page 30*.
6. From OFF position, turn the gas control knob counterclockwise  to IGN position. Push in control knob for 5 seconds. **NOTE:** *If you are running the heater for the first time, it may be necessary to press in the control knob for 30 seconds or longer to allow air to bleed out of the gas piping.*
7. With the control knob pushed in, push in and release the piezo ignitor button to light the pilot.
8. Continue pushing the control knob in for a further 60 seconds to prevent the flame detector from shutting off the gas while the probe is warming up. Release the control knob.
9. Turn gas control knob counterclockwise  to the ON position.
10. After the pilot has been lit for one minute, the burner can be turned on.
 - a. Slide the three (3) position button on the remote receiver to the ON position and the main gas flame should ignite in the Max. Height Setting.
 - b. Slide the button to OFF and the main gas flame should extinguish.
 - c. Slide the button to RS (the center position), press the ON button on the handheld transmitter to turn the system ON. The main gas flame should ignite in the Max Height Setting.
 - d. Press the OFF button to decrease flame height. Press the OFF button twice to lower flame level. Press the OFF button three times to turn main burner OFF.
11. If the gas logs will not operate, follow the instructions To Turn Off Gas To Heater below and call your service technician or gas supplier.

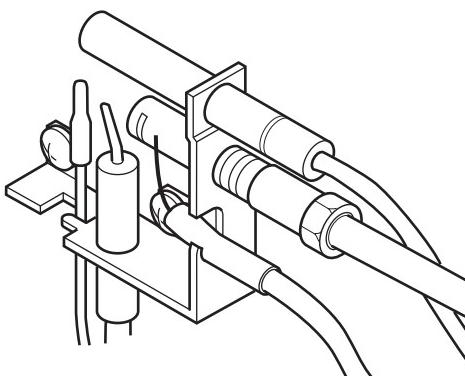


Figure 35 - Pilot

TO TURN OFF GAS TO HEATER

1. Turn control knob clockwise  to OFF position to completely shut off the heater.
2. If applicable: Turn ON/OFF switch to OFF position and/or set thermostat (if present) to lowest setting.
3. If applicable: Turn off all electric power to the heater.

OPERATING INSTRUCTIONS / CLEANING and SERVICING

MATCH LIGHTING INSTRUCTIONS

1. Remove any items necessary for easy access to the pilot (for example: logs, screens, etc.).
2. Follow appropriate lighting instructions found previously. Instead of pushing and releasing the piezo button, light a match and hold the flame to the end of the pilot and ignite the pilot.
3. After control knob has been released and pilot stays lit, reinstall any items that were removed for pilot access.
4. Call a qualified service technician for repair or replacement of the piezo ignitor.

CLEANING AND SERVICING

Annual inspection and cleaning by your dealer or qualified service technician is recommended to prevent malfunction and/or sooting.

WARNING

Turn off heater and allow to cool before cleaning. Disconnect electrical power before cleaning or servicing.

Remove logs, handling carefully by holding gently at each end. Gloves are recommended to prevent skin irritation from ceramic fibers. If skin becomes irritated, wash gently with soap and water. Refer to manual for correct log placement.

PERIODIC CLEANING - Refer to parts diagram for location of items discussed below.

- Do not use cleaning fluid to clean logs or any part of heater.
- Brush logs with soft bristle brush or vacuum with brush attachment.
- Vacuum loose particles and dust from the front and rear burner, control and piezo covers and grate weldment.
- Inspect and clean burner air intake holes. Remove lint or particles with vacuum, brush, or pipe cleaners.
Failure to keep air intake holes clean will result in sooting and poor combustion.
- External case should be dusted and wiped with a wet soapy cloth.

ANNUAL CLEANING/INSPECTION - Refer to parts diagram for location of items discussed below.

- Inspect and clean burner air intake holes. Remove lint or particles with vacuum, brush or pipe cleaners.
Failure to keep air intake holes clean will result in sooting and poor combustion.
- Inspect and clean all burner ports.
- Inspect ODS pilot for operation and accumulation of lint at air intake holes.
- Verify flame pattern and log placement for proper operation.
- Verify smooth and responsive ignition of main burner and rear burner.
- Replace battery in remote control device.

TROUBLESHOOTING

WARNING

Turn appliance OFF and allow to cool before servicing. Only a qualified service person should service and repair the heater.

Note: All troubleshooting items are listed in order of operation.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
When ignitor button is pressed, there is no spark at ODS/pilot.	1. Ignitor electrode positioned wrong. 2. Ignitor electrode is broken. 3. Ignitor electrode not connected to ignitor cable. 4. Ignitor cable pinched or wet. Keep ignitor cable dry. 5. Broken ignitor cable. 6. Bad piezo ignitor.	1 Replace ignitor. 2. Replace ignitor. 3. Reconnect ignitor cable. 4. Free ignitor cable if pinched by any metal or tubing. 5. Replace ignitor cable. 6. Replace piezo ignitor.
Appliance produces unwanted odors.	1. Appliance burning vapors from paint, hair spray, glues, etc. 2. Gas leak. 3. Initial burn off	1. Ventilate room. Stop using odor causing products while heater is running. 2. Locate and correct all leaks. 3. Ventilate room and turn unit on high until odor is gone. Odor should be gone after 6 hours of continuous use.
Appliance shuts off during use.	1. Not enough fresh air is available for ODS/ pilot to operate. 2. Low line pressure. 3. ODS/pilot is partially clogged. 4. Defective Thermopile. 5. Restrictions in incoming air flow.	1. Open window and/or door for ventilation. 2. Contact local gas company. 3. Clean ODS/pilot. 4. Check wire connections. Check output should be 500 Millivolts across TH/TP and TP Terminals with ON/OFF switches off. 5. Check for bottom riser on glass door, sunken fireplace, excessive lava rock/ cinders densely packed against grate.
Gas odor even when control knob is in OFF position.	1. Gas leak. 2. Control valve defective.	1. Locate and correct all leaks. 2. Replace control valve.
When ignitor button is pressed, there is spark at ODS pilot, but no ignition.	1. Gas supply turned off or manual shutoff valve closed. 2. Control knob not in PILOT position. 3. Control knob not pressed in while in PILOT position. 4. Air in gas lines when installed. 5. ODS/pilot is clogged. 6. Gas regulator setting is not correct.	1. Turn on gas supply or open manual shutoff valve. 2. Turn control knob to PILOT position. 3. Press in control knob while in PILOT position. 4. Continue holding down control knob. Repeat igniting operation until air is removed. 5. Replace ODS/pilot assembly or get it serviced. 6. Check incoming pressure. Replace gas regulator.

TROUBLESHOOTING

WARNING

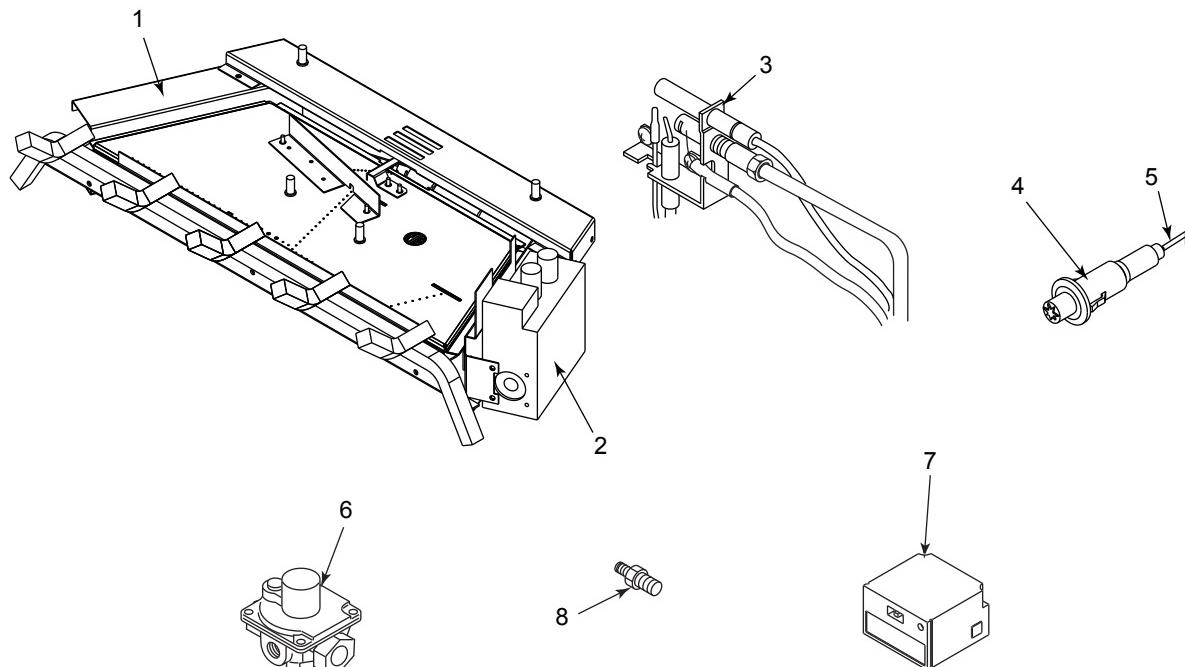
If the gas quality is bad, your pilot may not stay lit, the burners may produce soot and the heater may backfire when lit. If the gas quality or pressure is low, contact your local gas supplier immediately.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
ODS/pilot lights, but flame goes out when control knob is released.	<ol style="list-style-type: none">Control knob not fully pressed in.Control knob not pressed in long enough.Manual shutoff valve not fully open.Thermocouple connection loose at control valve.Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by either low gas pressure, or a dirty or partially clogged ODS/pilot.Thermocouple damaged.Control valve damaged.	<ol style="list-style-type: none">Press in control knob fully.After ODS/pilot lights, keep control knob pressed in for 30 seconds.Fully open manual shutoff valve.Hand tighten thermocouple connection until snug, then tighten 1/4 turn more.Contact local gas company.Replace thermocouple.Replace control valve.
Burner does not light after ODS/pilot is lit.	<ol style="list-style-type: none">Burner orifice is clogged.Burner orifice diameter is too small.Inlet gas pressure is too low.	<ol style="list-style-type: none">Burner orifice is clogged.Burner orifice diameter is too small.Inlet gas pressure is too low.
Burner backfires during combustion	<ol style="list-style-type: none">Manifold pressure is too low.Burner orifice is clogged.	<ol style="list-style-type: none">Contact local gas company.Clean burner or replace burner orifice.
Slight smoke or odor during initial operation.	<ol style="list-style-type: none">Burner orifice is clogged or damaged.Burner is damaged.Gas regulator defective.	<ol style="list-style-type: none">Clean burner or replace burner orifice.Replace burner.Replace gas regulator.
Logs appear to smoke after initial operation.	<ol style="list-style-type: none">Vapors from paint or curing process of logs.	<ol style="list-style-type: none">Problem will stop after a few hours of operation. Run the heater with the damper open if you have one, or open a window for the first few hours.Log heater is intended to be smokeless. Turn OFF heater and call qualified service person.
Heater produces a whistling noise when burner is lit.	<ol style="list-style-type: none">Turning control knob to HIGH position when burner is cold.Air in gas line.Dirty or partially clogged burner orifices.	<ol style="list-style-type: none">Turn control knob to LOW position and let warm up for a minute.Operate burner until air is removed from line. Have gas line checked by local gas company.Clean burner or replace burner orifice.
No gas to pilot.	<ol style="list-style-type: none">LP-regulator shut down due to inlet pressure too high.	<ol style="list-style-type: none">Verify LP tank regulator is installed and set at 11" to 13" w.c.Replace regulator on heater.

BURNER ASSEMBLY

WARNING

Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.

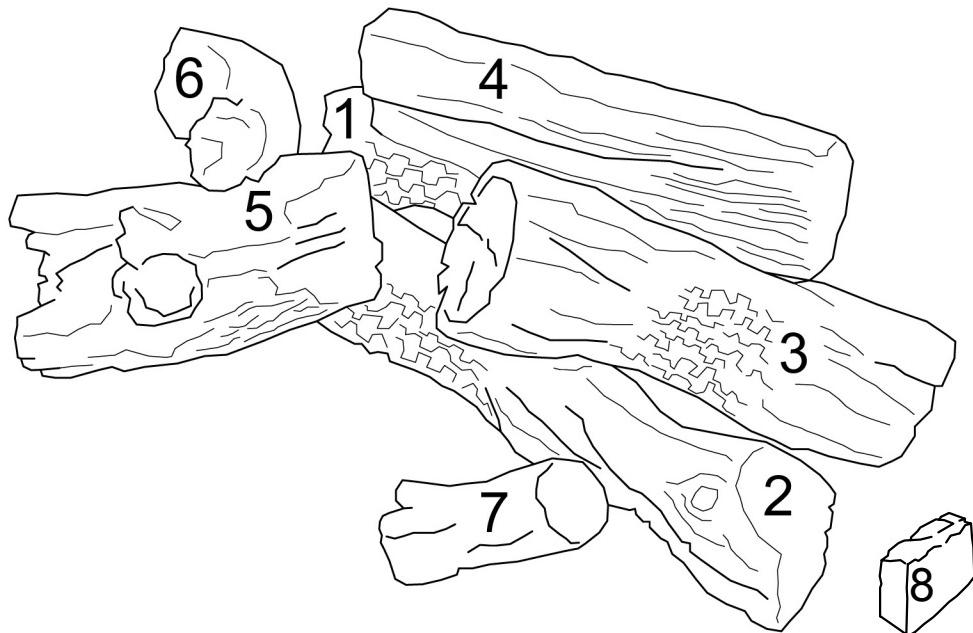


BURNER ASSEMBLY

Item	Description	Qty.	MJ27NR Natural	MJ27PR Propane
1.	Burner	1	86D0017	86D0018
2.	Control Valve	1	20H2081	20H2082
3.	ODS Pilot Assembly	1	14D0473	14D0477
4.	Piezo Igniter	1	14D0503	14D0503
5.	Piezo Wire	1	00K0632	00K0632
6.	Pilot Regulator	1	14D0469	--
7.	Thermostatic ON/OFF	1	RCSIT	RCSIT
	Flame Height Adj.	1		
	Remote Control			
8.	Injector	1	70D0064	20H2084
9.	Andiron Kit (not shown)	1	FAI135	FAI135

REPLACEMENT PARTS ARE AVAILABLE THROUGH YOUR RETAILER.

REPLACEMENT PARTS LIST



LOGS

Item	Description	Qty.	MJ27
1.	Log #1	1	75D0536
2.	Log #2	1	75D0537
3.	Log #3	1	75D0538
4.	Log #4	1	75D0539
5.	Log #5	1	75D0540
6.	Log #6	1	75D0541
7.	Log #7	1	75D0542
8.	Log #8	1	86D0019

WARNING

Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.

REPLACEMENT PARTS ARE AVAILABLE THROUGH YOUR RETAILER.

NOTES

LIMITED LIFETIME WARRANTY POLICY

LIFETIME WARRANTY

The following components are warranted for life to the original owner, subject of proof of purchase: Firebox, Combustion Chamber, Heat Exchanger, Grate, and Stainless Steel Burners.

FIVE YEAR WARRANTY

The following components are warranted for 5 years to the original owner, subject of proof of purchase: Vent Free Ceramic Fiber Logs and Aluminized Burners.

BASIC WARRANTY

Monessen Hearth Systems (MHS) warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of two years from date of installation. After installation, if any of the components manufactured by MHS in the appliance are found to be defective in materials or workmanship, MHS will, at its option, replace or repair the defective components at no charge to the original owner. MHS will also pay for reasonable labor costs incurred in replacing or repairing such components for a period of two years from the date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

This Limited Lifetime Warranty will be void if the appliance is not installed by a qualified installer in accordance with the installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damage by accident, neglect, misuse, abuse, alteration, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, reinstallation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by an authorized service representative.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. Monessen Hearth Systems, Inc. does not assume for it any other obligations or liability in connection with the sale or use of the appliance. In states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations or exclusions may not apply to you. You may also have additional rights not covered in this Limited Lifetime Warranty.

MHS reserves the right to investigate any and all claims against the Limited Lifetime Warranty and decide upon method of settlement.

IF WARRANTY SERVICE IS NEEDED...

1. Contact your supplier. Make sure you have your warranty, your sales receipt and the model/serial number of your MHSC product.
2. DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.

MHSC

149 Cleveland Drive • Paris, Kentucky 40361
www.mhsc.com

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